UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/622,697	07/21/2003	Kazunari Yamauchi	0033-0891P	4390

2292 7590 09/12/2007

BIRCH STEWART KOLASCH & BIRCH
PO BOX 747
FALLS CHURCH, VA 22040-0747

EXAMINER	
TRAN, NHAN T	

ART UNIT	PAPER NUMBER
2622	

NOTIFICATION DATE	DELIVERY MODE
09/12/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No.	Applicant(s)	
	10/622,697	YAMAUCHI, KAZUNARI	
	Examiner	Art Unit	
	Nhan T. Tran	2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 June 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-11 and 13-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-11 and 13-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11 June 2007* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 6/11/2007 with respect to claims 1, 3-6, 8-11, 13-14, 16-18 have been considered but are moot in view of the new ground(s) of rejection.

2. Applicant's arguments filed 6/11/2007 with respect to claims 7, 15, 19-22 have been fully considered but they are not persuasive.

The Applicant asserts that:

(i) Medwick does not use a variable difference between two different exposure levels. While Kawahara does recite the use of a difference between two exposure levels to improve exposure levels, the combination of Kawahara and Medwick does not recite the use of the difference between two varying exposure levels to look up the appropriate amount of light to be emitted from a look-up table to improve exposure levels (remarks, page 13).

(ii) Kawahara does not mention the initialization of the emission of light in accordance with detected exposure levels. Nor is this aspect of the invention of claim 19 recited in Hiroshi. Hiroshi requires that a preliminary light emission button be operated before emitting light, (see Hiroshi page 5 lines 6-9), the invention of currently amended claim 19 requires only that the image pick-up unit be in an image pick-mode in order to emit light. The start of emission of light in Hiroshi occurs independently of the camera being in an image pick-up mode (see Hiroshi page 5 lines 5, 9-10). The invention of claim 19 requires that the image pick-up unit be in an image pick-up mode in order to

begin emission of light in accordance with a detected exposure level regardless of whether the shutter key has been operated or not.

In response, the Examiner understands the Applicant's arguments but respectfully disagrees for the following reasons:

(i) Medwick is not relied upon for the teaching of using a variable difference between two different exposure levels since this feature is fundamentally taught by Kawahara. Instead, Medwick is relied upon for a look-up table storing a plurality of preset values used for assisting adjustment of light quantity of the flash device to improve visual quality of exposed image as analyzed in the previous office action. It is clear that Kawahara teaches all limitations of claims 7 & 15 but is just silent about using a look-up table having light emission quantity registered to read corresponding light emission quantity which is taught by Medwick. Thus, the combined teaching of Kawahara and Medwick has met the limitations required by claims 7 & 15.

(ii) Kawahara teaches a video still camera (see paragraph [0242]) that initializes the emission of light in accordance with detected exposure levels as shown in Fig. 13B and paragraphs [0171]-[0179]. Thus, Hiroshi is not relied upon for this feature. It should be noted that the image pick-up mode is already set in both Kawahara and Hiroshi prior to the operation of the shutter key. As taught by Kawahara in Figs. 13A & 13B, the image pick-up mode was already set (i.e., by turning power on or switching from a playback mode) in such the video still camera prior to the operation of capturing an image shown in Fig. 13A & 13B. Turning to Hiroshi, it is seen that Hiroshi does not have a playback mode (not disclosed). Thus, when the camera of Hiroshi is turned on,

it is automatically set to an image pick-up mode by inherency. Therefore, in order to emit light in both Kawahara and Hiroshi, the image pick-up mode must be set beforehand. Furthermore, as disclosed by Hiroshi the flash device (7, 9) emits light in response to the preliminary light emission button 28 regardless of the shutter button 27 (see abstract and page 4, lines 5-9). However, it cannot be said that the light emission is independent of the image pick-up mode since the image pick-up mode was already set prior to the light emission in Hiroshi as discussed above in order for the camera to function as disclosed. At best, the light emission in Hiroshi is operated independent (regardless) of the shutter key. In view of the above, the combined teaching of Kawahara and Hiroshi has met the limitations of claim 19.

Drawings

3. The replacement drawing of Fig. 10 filed on 6/11/2007 is accepted.

Claim Objections

4. Claims 7 & 15 are objected to because of the following informalities: Each of claims 7 & 15 recites "a plurality of **said** differences" which should be corrected to be in a way that consistent with said difference in the claims. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1, 3-5, 11, 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawahara (US 2001/0019364) in view of Yamamoto et al. (US 5,438,367).

Regarding claim 1, Kawahara discloses a portable device (an electronic camera, paragraph [0242]) having an image pick-up unit (161 shown in Fig. 11) picking-up an image of an object and outputting image information (see paragraph [0150]), comprising:

a light source (flash unit 5) emitting light to said object (Fig. 11);

control unit (combined circuits 4 and 332-336 shown in Fig. 11) for controlling an emission by said light source based on quantity of light emission, in an image pick-up mode (see paragraphs [0150]-[0154] and note that the image pick-up mode is inherently set prior to the start of the flowchart shown in Fig. 13A & 13B in paragraphs [0155]-[0179] as discussed in the Examiner's response above);

exposure detecting unit (combined circuits 1 and 336 shown in Fig. 11) for detecting exposure level based on said image information; wherein said control unit includes light emission quantity determining unit (4) for determining said quantity of light emission, comparing unit (334, 336) for detecting a difference by comparing said

exposure level detected by said exposure detecting unit with said light source emitting light (steps S337-S380 shown in Fig. 13A) based on said light emission quantity determined by said light emission quantity determining unit and said exposure level detected by said exposure detecting unit with said light source not emitting light (without emission of flash at steps S373-S375 shown in Fig. 13A); and said light emission quantity determining unit determines said light emission quantity (steps S384-S389 shown in Fig. 13B) based on said difference detected by said comparing unit to have said exposure level match an optimal level (see paragraphs [0155] – [0179], wherein the optimal level is considered as the exposure level after emission amount adjustment in steps 385-389).

Although Kawahara teaches the comparing unit and the light emission quantity determining unit are activated for a single image pick-up operation, Kawahara does not teach that the comparing unit and the light emission quantity unit are activated repeatedly for a single image pick-up operation until said exposure level detected by said exposure detecting unit matches the optimal level.

However, as taught by Yamamoto, a digital still camera (Fig. 1) is implemented with a flash control unit for controlling exposure for a single image pick-up operation (a still image pick-up operation). According to Yamamoto, the processing for detecting the amount of strobe light emission, the processing for judgment and the processing for correction are preferably repeated unit it is judged that the difference between the mounts of strobe light emissions is within an allowable range (an optical range) (see Yamamoto, col. 2, line 65 – col. 3, line 2 and col. 11, lines 25-29). Yamamoto teaches

that by repeatedly activating the plurality of operations for comparing and determining, the amount of strobe light emission becomes proper so that relatively proper exposure control is carried out (see Yamamoto, col. 2, lines 62-64).

Therefore, it would have been obvious to one of ordinary skill in the art to reconfigure the imaging apparatus in Kawahara in view of the teaching of Yamamoto such that the comparing unit and the light emission quantity unit are activated repeatedly for a single image pick-up operation until said exposure level detected by said exposure detecting unit matches the optimal level so as to further improve exposure control for a single image pick-up operation as taught by Yamamoto above.

Regarding claim 3, it is clear in the combined teaching of Kawahara and Yamamoto that the optimal level is a target exposure level (a proper final exposure level realized by the proper light emission) for said image information (see Yamamoto, col. 2, line 65 – col. 3, line 2 and col. 11, lines 25-29).

Regarding claim 4, it is also seen in Kawahara and Yamamoto that said exposure detecting unit detects said exposure level with said light source emitting light based on said light emission quantity determined by said light emission quantity determining unit (steps S377-S390 in Fig. 13A & 13B of Kawahara), and immediately thereafter (for a next image capture sequence) said exposure detecting unit detects said exposure level with said light source not emitting light (steps S373-S376).

Regarding claim 5, Kawahara in view of Yamamoto further discloses a storing unit (recording unit 13 in Fig. 11 of Kawahara) storing image data corresponding to said image information; wherein when said exposure level detected by said exposure detecting unit matches said optimal level, said image data is stored in said storing unit (see Kawahara, paragraphs [0179] and [0008]).

Regarding claim 11, Kawahara also discloses an exposure adjusting device (Figs. 11, 13A & 13B and paragraph [0001]), comprising:

exposure detecting unit (combined circuits 1 and 336) for detecting an exposure level based on image information obtained by picking-up an image of an object (Fig. 11);

light emission quantity determining unit (4) for determining, in an image pick-up mode, a light emission quantity of a light source provided in advance (preset quantity of light as preliminary flash) for emitting light to said object (S377 in Fig. 13A); and comparing unit (combined circuits 334 and 336) detecting a difference by comparing said exposure level detected by said exposure detecting unit with said light source emitting light (S377-S380 in Fig. 13A) based on said light emission quantity determined by said light emission quantity determining unit and said exposure unit detected by said exposure detecting unit with said light source not emitting light (without light emission at S373-S375 in Fig. 13A); wherein said light emission quantity determining unit determines said light emission quantity (by increasing, decreasing or maintain the current flash quantity in S285-S387 shown in Fig. 13B) based on said difference

detected by said comparing unit to have said exposure level match an optimal level (see paragraphs [0157] – [0179] and note that the analysis of claim 1 is also applied to this claim).

Although Kawahara teaches the comparing unit and the light emission quantity determining unit are activated for a single image pick-up operation (a still image pick up operation), Kawahara does not teach that the comparing unit and the light emission quantity unit are activated repeatedly for a single image pick-up operation until said exposure level detected by said exposure detecting unit matches the optimal level.

However, as taught by Yamamoto, a digital still camera (Fig. 1) is implemented with a flash control unit for controlling exposure for a single image pick-up operation (a still image pick-up operation). According to Yamamoto, the processing for detecting the amount of strobe light emission, the processing for judgment and the processing for correction are preferably repeated unit it is judged that the difference between the mounts of strobe light emissions is within an allowable range (an optical range) (see Yamamoto, col. 2, line 65 – col. 3, line 2 and col. 11, lines 25-29). Yamamoto teaches that by repeatedly activating the plurality of operations for comparing and determining, the amount of strobe light emission becomes proper so that relatively proper exposure control is carried out (see Yamamoto, col. 2, lines 62-64).

Therefore, it would have been obvious to one of ordinary skill in the art to reconfigure the apparatus in Kawahara in view of the teaching of Yamamoto such that the comparing unit and the light emission quantity unit are activated repeatedly for a single image pick-up operation until said exposure level detected by said exposure

detecting unit matches the optimal level so as to further improve exposure control for a single image pick-up operation as taught by Yamamoto above.

Regarding claims 13 & 14, this claim is also met by the analysis of claim 3 & 4, respectively.

6. Claims 6, 8, 10, 16 & 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawahara and Yamamoto and in further view of Numata et al. (US 6,654,062).

Regarding claim 6, since Kawahara discloses that the portable device is an electronic camera (video or still camera as described in [0242]), inherently included in the camera of Kawahara is a shutter key that is pressed/operated by a user outside the portable device (note that "operated outside" is interpreted as user pressing or operating the shutter key in which the user is outside the portable device) to instruct storage of said image data to said storing unit (recording unit 13 in Fig. 11).

Kawahara and Yamamoto do not explicitly disclose that when said exposure level detected by said exposure detecting means matches said optimal level, whether said shutter key is operated or not is determined.

However, Numata teaches the use of a shutter key button (37) of an electronic camera (Fig. 2) to trigger a detection of exposure level for determining a proper exposure value and to instruct storage of image to a storing unit (memory card) as

shown in Fig. 7 at steps S9-S19, col. 6, lines 61-65 and col. 8, lines 12-18. Such operation of the shutter key would conveniently provide the user an excellent control over the camera during a photographing session for when to capture and record an image while effective utilizing power supply of the camera for operating exposure control processing.

Therefore, it would have been obvious to one of ordinary skill in the art to configure the electronic camera in Kawahara in view of the teaching of Numata such that whether a shutter key is operated or not is determined when said exposure level detected by said exposure detecting means matches optimal level so as to conveniently provide the user an excellent control over the camera during a photographing session for when to capture and record an image while effective utilizing power supply of the camera for operating exposure control processing.

Regarding claim 8, Kawahara in view of Yamamoto as discussed in claim 1 discloses that said control means includes starting state setting means for setting said light source (see S372-S376 in Fig. 11 of Kawahara) to a non-emission state at a start of said image pick-up mode (see Kawahara, paragraphs [0157]-[0162]).

Kawahara and Yamamoto are silent about start level determining unit for determining whether said exposure level detected by said exposure detecting unit in said non-emission state set by said starting state setting unit matches said optimal level or not; wherein when it is determined by said start level determining unit that the

exposure level does not match, said light emission quantity determining unit and said comparing unit are activated.

Numata teaches that an exposure level in a non-emission state (no flash is emitted) is detected by an exposure detecting means (step S2 in Fig. 7) for determining whether or not the exposure level is smaller than an optimal value required for capturing an image without emission of flash unit. If the exposure value is smaller than the optimal value, the flash is activated (step S10) for further determination of exposure level prior to recording the image (see Numata, Fig. 7 and col. 5, line 66 – col. 6, line 65). The determination at step S2 in Fig. 7 would reduce unnecessary exposure processing with flash emission when ambient light is sufficient enough to capture a good image.

Therefore, it would have been obvious to one of ordinary skill in the art to modify the imaging apparatus of combined Kawahara and Yamamoto in view of the teaching of Numata to arrive at the Applicant's claimed invention so as to enhance the exposure control by reducing unnecessary exposure processing with flash emission when ambient light is sufficient enough to capture a good image as suggested in step S2 in Fig. 7 of Numata above.

Regarding claim 10, Although Kawahara and Yamamoto do not disclose that the image pick-up mode includes a close-up mode and non-close-up mode that are switchable, such lack of teaching is compensated by Numata as shown in Fig. 4 in which the camera includes both close-up mode and normal mode (non-close-up mode)

to allow the user to switch to a close-up mode from a normal mode and vice versa depending on the need at the time of photographing (see Fig. 4 and col. 4, lines 56-60).

Therefore, it would have been obvious to one of ordinary skill in the art to further combine teachings of Kawahara, Yamamoto and Numata to provide an imaging apparatus with both close-up mode and non-close-up mode that are switchable so as to allow the user to take not only normal images but also close-up images as desired at the time of photographing.

Regarding claims 16 & 18, these claims are also met by the analyses of claims 8 & 10, respectively.

Claims 7 & 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawahara and Yamamoto and in further view of Medwick et al. (US 7,092,029 B1).

Regarding claim 7, as discussed in claim 1, the same limitations of claim 7 are also met by the combined teachings of Kawahara and Yamamoto.

Although Kawahara discloses that the light emission is adjusted by increasing, decreasing or remain the light quantity (S385-S387 in Fig. 13B) corresponding to each of a plurality of said differences based on said difference detected by said comparing means, Kawahara and Yamamoto do not explicitly disclose a looked-up table having light emission quantity registered to read corresponding light emission quantity.

Medwick teaches an exposure control for an electronic camera in which a look-up table (Fig. 6) is registered in the camera memory with a plurality of light emission quantities (strobe durations and associated power values) corresponding to each of detected luminance levels of an object, and the light quantity emission is read to correct exposure according the detected luminance so that the visual quality of exposed image is highly improved (see Medwick, Fig. 6, col. 7, lines 30-45 and col. 2, lines 21-32).

Therefore, it would have been obvious to one of ordinary skill in the art to provide look-up table in the apparatus of combined Kawahara and Yamamoto in view of the teaching of Medwick to arrive at the Applicant's claimed invention so that the visual quality of exposed image would be highly improved as taught by Medwick above.

Regarding claim 15, the limitations of this claim are also met by the analysis of claim 7.

7. Claims 19 & 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawahara (US 2001/0019364 A1) in view of Terunuma Hiroshi (JP07-072536).

Regarding claim 19, Kawahara discloses a portable device (an electronic camera shown in Figs. 11-13B) having an image pick-up unit (161) picking-up an image of an object and outputting image information (see paragraphs [0242] and [0150]), comprising:

a light source (flash unit 5 in Fig. 11) emitting light to said object;

a storing unit (recording unit 13 in Fig. 11) storing image data corresponding to said image information (see [0008]);

a shutter key (see paragraph [0242] in which "a shutter key" is inherently included in such an electronic camera in order for the camera to function);

control unit (camera controller executes the flowchart as shown in Figs. 13A & 13B) storing image data corresponding to said image information in said storing unit in response to an operation of said shutter key, and when an image pick-up mode is set (see paragraphs [0008], [0040]-[0041]), and starting emission of light of said light source in accordance with an exposure level based on said image information (see Figs. 13A & 13B and [0150] – [0179] and note the Examiner's response in section 2 above for the image pick-up mode).

Kawahara fails to teach that said emission of light of said light source is started *regardless* of an operation of said shutter key when an image pick-up mode is set.

However, in a reference to Hiroshi, a flash device (7, 9) is automatically emitted light regardless of a shutter operation so as to enable the camera to photograph an object where image shadow is reduced (see Hiroshi, Abstract).

Therefore, it would have been obvious to one of ordinary skill in the art to modify the camera of Kawahara such that said emission of light of said light source is started in response to the exposure level based on said image information *regardless* of an operation of said shutter key when an image pick-up mode is set so as to effectively reduce image shadow upon actually capturing an image.

Regarding claim 20, it is inherent in the combined teachings of Kawahara and Hiroshi that said control unit stops emission of said light source in response to the exposure level based on said image information regardless of the operation of said shutter key, in a state after emission of said light source is started (it is noted that the light emission of the flash device in Hiroshi is *inherently stopped* after it emitted light).

8. Claims 21 & 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawahara and Terunuma Hiroshi and in further view of Yamazaki (US 6,351,606 B1).

Regarding claim 21, the combined teachings of Kawahara and Hiroshi as analyzed in claim 20 do not disclose a display unit for displaying various pieces of information; wherein said control unit displays image data corresponding to said image information on said display unit when said image pick-up mode is set.

Yamazaki teaches an electronic camera having a display unit (LCD 24) that displays a plurality of information (i.e., exposure warning information) in addition to image information when the image pick-up mode is set so that the user can be timely informed regarding exposure condition of the image capture and the user can also review captured images on the display unit for confirmation (see Yamazaki, Figs. 1-3, col. 5, lines 35-48 and col. 8, lines 41-44).

Therefore, it would have been obvious to one of ordinary skill in the art to combine teachings of Kawahara, Hiroshi and Yamazaki to arrive at the Applicant's claimed invention by providing a display unit for displaying various pieces of information,

wherein said control means displays image data corresponding to said image information on said display unit when said image pick-up mode is set so that the user would be timely informed regarding exposure condition of the image capture and would be also able to review captured images on the display unit for confirmation as taught by Yamazaki above.

Regarding claim 22, the limitations of this claim are also met by the analysis of claim 21.

9. Claims 9 & 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawahara, Yamamoto and Numata et al. as applied to claim 8 and in further view of Yamazaki (US 6,351,606).

Regarding claim 9, Kawahara, Yamamoto and Numata do not teach that when it is determined by said start level determining unit that the exposure level does not match, said light emission quantity determining unit determines said light emission quantity to be the maximum quantity that can be emitted by said light source.

However, Yamazaki teaches an exposure control for an electronic camera in which when an exposure level does not match to a preset value (under-exposure shown in S14 in Fig. 4), the camera controls a flash unit to emit light at a maximum amount (full emission in S16, S21 in Fig. 4) to obtain best exposure possible for image recording (see Yamazaki, Figs. 3 & 4 and col. 7, lines 16-39).

Therefore, it would have been obvious to one of ordinary skill in the art to further modify the camera in Kawahara and Numata in view of the teaching of Yamazaki by configuring said light emission quantity determining means to determine said light emission quantity to be the maximum quantity that can be emitted by said light source when it is determined by said start level determining means that the exposure level does not match so as to provide best exposure possible for image recording as taught by Yamazaki.

Regarding claim 17, the limitations of this claim are also met by the analysis of claim 9.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nhan T. Tran whose telephone number is (571) 272-7371. The examiner can normally be reached on Monday - Friday, 8:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NHAN T. TRAN
Patent Examiner